UNITED STATES DEPARTMENT OF VETERANS AFFAIRS
SANITARY SEWER IMPROVEMENTS
FOR
DAYTON VETERANS AFFAIRS MEDICAL CENTER
2013

HORIZONTAL CONTROL

The coordinates shown on this map are based on the Ohio State Plane Coordinate System, South Zone, NAD 83 (CORS96). Said coordinates originated from a field traverse which was tied (referenced) to said coordinate system by positional solutions derived by the National Geodetic Survey's Online Positioning Users Service software using GPS observations of selected CORS base stations in the National Spatial Reference System. The grid to ground scale factor (1.00008581590433) was applied at the location of point number 202

Point Number – 14: Traverse iron pipe set with a cap located on the west side of South Gettysburg Avenue at the intersection of McCall Street and South Gettysburg Avenue.
(N.641003.64,E.1475554.19) Elev. = 900.98

Point Number – 420: Chiseled "X" on the west bolt of a fire hydrant located at the northeast corner of the intersection of Pennsylvania Avenue and Ohio Avenue.
(N.640756.63,E.1474969.99) Elev. = 917.13

Point Number – 13: Traverse iron pipe set with a cap located on the west side of South Gettysburg Avenue at the intersection of Chicamauga Avenue and South Gettysburg Avenue.
(N.640416.18,E.1475545.08) Elev. = 900.87

Point Number – 8: Traverse iron pipe set with a cap located at the southwest corner intersection of Iowa Avenue and New York Avenue.
(N.638725.23,E.1474131.48) Elev. = 961.59

Point Number – 9: Traverse iron pipe set with a cap located on the south side of New York Avenue (east west) and 580 feet from the intersection of Iowa Avenue and New York Avenue (north south).
(N.638636.65,E.1474736.54) Elev. = 920.98

Point Number – 201: Traverse iron pipe set with a cap located 80 feet northwest from the intersection of Michigan Avenue and Rhode Island access drive.
(N.640171.78,E.1472084.64) Elev. = 965.93

Point Number – 202: Traverse magnail set with a shiner located at the northwest corner intersection of Michigan Avenue and California Avenue.
(N.639864.87,E.1471703.14) Elev. = 974.74

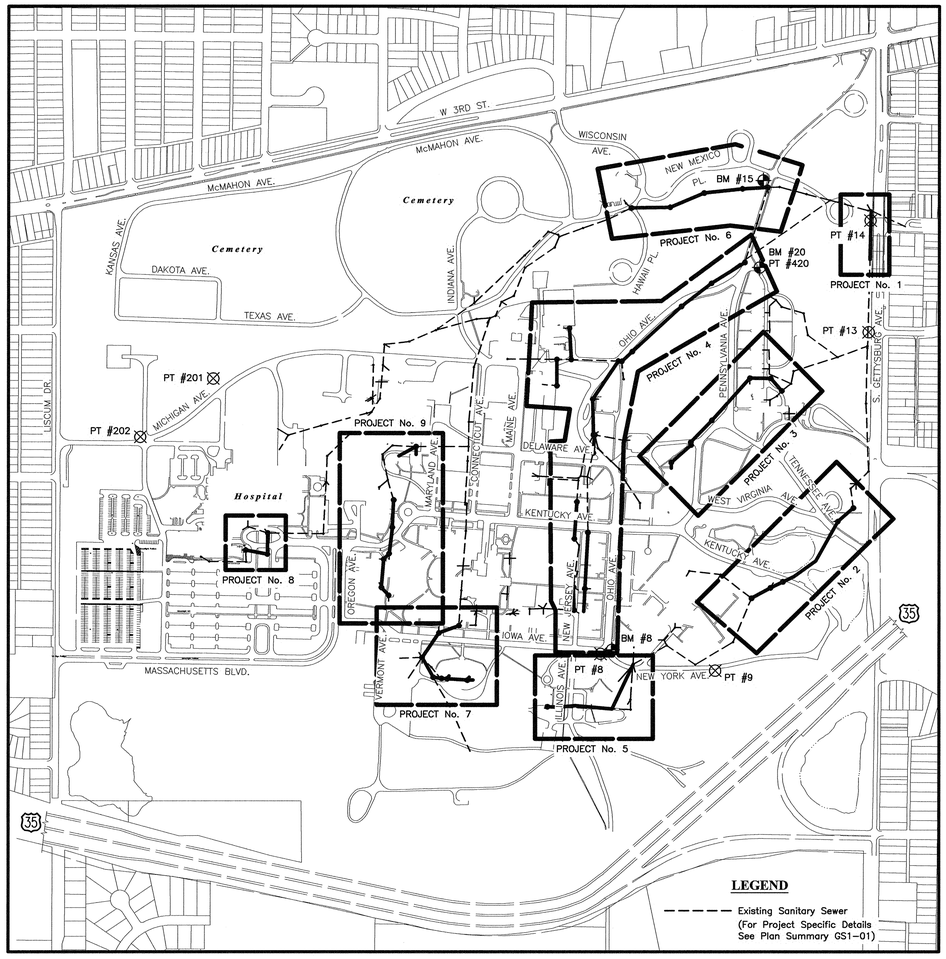
BENCH MARKS
(NAVD 1988)

The elevations shown are based on the North American Vertical Datum of 1988. Said elevations originated from positional solutions derived independently from GPS observations of selected CORS base stations in the National Spatial Reference System and processed by the National Geodetic Survey's Online Positioning User Service Software and the GEOID09 model. Elevations from said traverse control points were then transferred by conventional leveling procedures to the permanent benchmarks listed hereon.

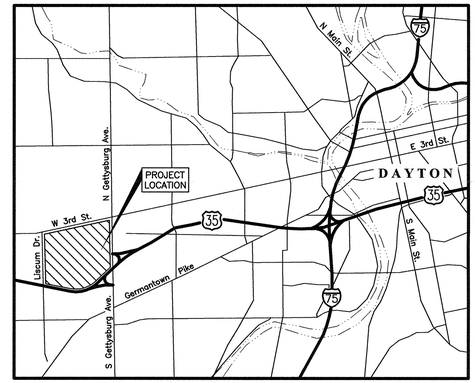
BM#8 Chiseled "X" on west side of a fire hydrant located on the east side of the intersection of Iowa Avenue and New York Avenue.
(N.638746.46,E.1474192.06) Elev. = 960.44

BM#15 Chiseled square on the northwest corner of a concrete light pole base located at the southwest corner of the intersection Pennsylvania Avenue and New Mexico Place.
(N.641210.99,E.1475007.89) Elev. = 910.78

BM#20 Chiseled "X" on the west bolt of a fire hydrant located the northeast corner of the intersection of Pennsylvania Avenue and Ohio Avenue.
(N.640756.63,E.1474969.99) Elev. = 917.13



INDEX MAP



LOCATION MAP
No Scale

GRAPHIC SCALE
0 200 400 800
1 inch = 400 feet

INDEX OF SHEETS

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Revisions	Date
100% CD Submittal	01/29/2013

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Revised By:

Drawing Title: TITLE SHEET	Project Title: SANITARY SEWER REHABILITATION
Approved: Project Manager: Chris Moorhead	Building Number: N/A; Checked: RMA; Drawn: DCH
Approved: Service Chief: Mark Permelia	Location: 4100 WEST THIRD STREET DAYTON, OH 45428
Date: 01/29/2013	Project No.: 552–13–309
Drawing No.: GS0-01	

VAMC, DAYTON
Department of Veterans Affairs

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2 Xrefs: 20120980-XS-REFR-E.dwg, 20120980-CS-TITL-N.dwg

SITE VISIT
Any performance of site subsurface investigations (test holes) shall be coordinated in advance with the Contracting Officer's Representative (COR) as warranted.

STANDARD DRAWINGS
Notes on the Ohio Department of Transportation (ODOT) Standard Drawings referencing "Payment by the Department" shall be disregarded. Payments are addressed in the V.A.'s basic contract documents.

REPAIR
The Contractor shall be responsible for the replacement, repair and/or restoration of all property damaged or disturbed during construction to its former condition, or better, and to the satisfaction of the COR. Such items include mailboxes, fences, gates, landscaping, buildings, etc..

NON-RUBBER TIRED VEHICLES
Non-Rubber Tired Vehicles shall not be moved on Dayton Veterans Affair's (V.A.) streets, existing private roadways, or parking lots.

STORAGE OF EQUIPMENT AND MATERIALS
No materials, including pipe, shall be stored within twenty (20) feet of any intersecting street or driveway. During non-working hours, storage of equipment shall comply with these same requirements. Compliance with these requirements shall not in any way relieve the Contractor of his legal responsibilities or liabilities for the safety of the public. The Contractor shall indicate his intent with regard to storage of material at the pre-construction meeting. Storage locations must be approved in writing by the COR prior to use.

CIPP material for Sanitary Lining shall be stored in accordance with manufacturer specifications in order to minimize exposure to sunlight and to maintain the temperature of the product to within manufacturer's recommendation to avoid premature curing. No material shall be stored in the open or in contact with the ground.

WORK HOURS
Work hours shall be between the hours of 7am and 5pm.

PERMITS
The Contractor shall secure & pay for all permits & government fees, licenses, and inspections necessary for the proper execution and completion of the improvements shown on the plans.

NOTIFICATION
The Contractor shall be responsible for notifications which shall include three (3) separate notices. The initial notification will provide general project information and be distributed shortly after the Notice to Proceed has been issued. The second notification shall alert to any utility disruptions and to advise minimal water usage. The second notice shall be distributed two (2) working days prior to commencement of work. The third notification shall inform that work on their portion of the sewer is complete and they may resume normal water usage. The third notice shall be distributed immediately upon completion of work. Please refer to Specification 33 01 30.72 Cured-in-Place Pipe for further details.

CONVENIENCE FACILITIES
The Contractor shall furnish and maintain sanitary convenience facilities for the workers and inspectors for the duration of the work.

PRE-CONSTRUCTION MEETING
No work shall start prior to a pre-construction meeting. The contractor shall provide shop drawings and schedule prior to or at the pre-construction meeting. No mobilization shall occur until the schedule is approved by the Contracting Officer Representative. The COR will notify the Contractor to arrange a time and date for this meeting. The COR shall authorize a start date.

CONFINED SPACE ENTRY
The Contractor shall follow OSHA requirements for "confined space entry," Title 29 of the Code of Federal Regulations, Part 1910.146 while performing work inside any manhole, sewer, or other permit required confined space. At least 10 working days prior to the start of work, the Contractor shall submit a Site Safety Plan which describes the Contractor's permit required confined space program for review by the COR. This program shall include a written entry permitting system, designated rescue service, entry and retrieval procedures and equipment, atmospheric testing procedures, employee training certifications for working in permit spaces, and provisions for meeting any other regulatory requirement relating to the entry of confined spaces. Contractor is hereby notified that it will also provide confined space entry and retrieval personnel and equipment, for certified confined space entry personnel of the Dayton V.A. and their representatives during project construction. The Dayton V.A. and their representatives will provide its personnel with personal protective devices including a full body harness. Contractor will provide these services for two Dayton V.A. representatives throughout all times that the Contractor is working within confined spaces.

EXISTING UTILITIES
The identity and location of the existing underground utility facilities known to be located in the construction area have been shown on the plans as accurately as provided by the Owner of the utility. The Dayton V.A. and/or Engineer assumes no responsibility as to the accuracy of the location or the depths of the underground facilities whether shown on the plans or not.

The Contractor shall be responsible for the investigation, location, support, protection, and restoration of all existing utilities and appurtenances whether shown on these plans or not. The Contractor is responsible for exposing all affected utilities and structures prior to construction to verify the vertical and horizontal effect on the proposed construction. The cost of this work is to be included in the price bid for the various items.

For offsite utilities, the Contractor shall cause notice to be given to the Ohio Utilities Protection Service, Phone (800)362-2764, toll free, or 811, 48 working hours prior to start of construction, and 48 hours prior to start of construction to the Owners of underground utility facilities shown on the plans who are not members of a registered underground protection service, in accordance with Section 153.64 of the Revised Code.

The Contractor shall also coordinate with the COR with regards to marking the locations of the underground utilities located on the Dayton V.A. property. The Contractor shall not perform any excavation work whatsoever without the approval of the COR.

BUILDING SERVICE LINES
The Contractor shall assume that each building has at least one electrical and telephone service located off the underground lines. Other utilities such as cable, Internet, etc. may also be located off the overhead lines. The Contractor shall assume that each building has at least one water and one gas service line.

It is the Contractor's responsibility to locate and support these service lines, above and below ground, if necessary. No additional payment will be provided for location and support of these service lines. Where service lines are cut or broken, the lines are to be restored to the standards of the owning company at the Contractor's expense.

CONDITION OF EXISTING SEWERS
The Contractor is advised that some of the existing sewers are in a compromised condition. Collapse of the sewer is possible prior to or during the lining process. The Contractor shall repair any damage or collapse prior to the lining operation. Cost for any repairs required by a changed condition from the bid tapes to the pre-lining tapes shall be approved by, and considered for additional compensation by COR before performing work in these areas.

MANHOLE INVERTS
When the cured-in-place pipe lining and manhole rehabilitation are complete it is the Dayton V.A.'s intention to have a smooth flow channel from pipe to pipe through the manhole, with no discontinuity in grade. This may be accomplished by lining through the manhole and cutting out the top of the liner or terminating the pipe liner at the manhole wall and building up the base and channel of the manhole as required, matching the invert of the pipe liner. Base and channel work shall be in accordance with Specification 33 01 30.62. The Contractor must correct manholes with flow line discontinuities prior to acceptance.

DETERMINATION OF ACTIVE SEWER LATERALS
Sewer service laterals and other sewer lines tying into the existing sewers shall be evaluated to determine if they are active. It is the intent of this contract to re-establish only those lateral sewers that are active, or for which inactivity cannot be confirmed. Lateral sewers that are determined to be inactive shall not be reconnected to the sewer after pipe replacement, installation, and/or lining.

PROTRUDING TAPS
All protruding lateral taps, whether shown on these plans or not, shall be removed flush with the wall of the main line sewer prior to installation of the CIPP liner. Care shall be taken to ensure that the lateral sewer is not damaged beyond the connection point to the main.

MAINTENANCE OF SANITARY SERVICE / BYPASS PUMPING
The Contractor shall bypass sewage as required around the sections of the sewer that are to be reconstructed or rehabilitated. Refer to Specification 33 01 30.51, Bypass Pumping, for additional requirements for performing this task.

The Contractor shall operate the bypass pumps so that there is no release to the storm sewers.

SEWER CLEANING
Heavy objects such as debris, stone, rock, construction materials, manhole covers, etc. found in the sewer shall be removed as part of the cleaning process with no separate payment.

CIPP LINER THICKNESS
The Cured-in-Place Pipe liner thickness shown on the plans is the calculated thickness based on ASTM 1216 methodology. Prior to the lining the Contractor shall submit liner thickness calculations to the Design Engineer for review and approval in accordance with Specification 33 01 30.72. The approved liner thickness shall govern the work, subject to the minimum thickness requirement. The Contractor shall assume all responsibility for liner thickness.

PROCESS WASTEWATER
Process wastewater generated from pipe lining operations shall be cooled to a maximum temperature of 100 degrees Fahrenheit and then discharged into the Dayton V.A. Sanitary Sewer System or contained and disposed of offsite. Under no circumstances shall the process wastewater be discharged into the City's Stormwater System, which would be a violation of Ohio Revised Code 6111 and as such, subject to SEVERE PENALTIES that would be incurred by the Contractor.

MANHOLE REHABILITATION
Sanitary manholes shall be rehabilitated in accordance with Specification 33 01 30.62. Rehabilitation must be performed following completion of any required grade adjustment or reconstruction to grade and may include cementitious lining, base and channel rehabilitation, and installation of new frame and cover, etc. for each manhole rehabilitated. Manhole rehabilitation will take place after the cured-in-place lining operations are complete. All removed manhole frames, lids, and drip dishes shall be given to the Dayton V.A. upon removal.

A table of manhole rehabilitation components is included on Sheet GS0-03 of this plan set. The Contractor shall perform all the recommended rehabilitation components provided on the table as part of this project.

RESIDUAL GROUT
Contractor shall not allow residual grout in the grouting hoses to be blown out onto the manhole floor, channel or bench. All residual grout shall be removed and properly disposed of.

SAWING PAVEMENT
The pavement shall be saw cut to full depth in neat, straight lines. If the cut edge of the pavement is damaged during construction, The pavement shall be recut to neat, straight lines prior to paving operations. See Pavement Replacement Details Sheet GS2-01.

CURB AND SIDEWALK SAW CUT
Saw cut providing an edge that is vertical and neatly trimmed behind all broken pavement/concrete fragments to provide a single straight line. Contractor is responsible for protecting adjacent driveway, sidewalk, underdrain and replacement of the same if damaged due to contractor's work. Sidewalks shall be constructed according to Specification Section 32 05 23. All joints and edges to be tooled after broom finish. All exposed surfaces of concrete curb and gutter shall have a brush finish and completely covered with concrete cure and seal, including the backside of curb. ¾-in expansion joints shall be installed at right angles to the curb line within 10-feet of all immovable structures and at points of curvature. Contraction joints shall be saw cut at 10-foot intervals, not less than 2-inches deep, and as soon as possible without causing damage to the concrete.

MAINTAIN DRAINAGE
The flow in all sewers, drains, field tiles and watercourses encountered shall be maintained by the Contractor at his own expense, and whenever such watercourses and drains are disturbed or destroyed during the prosecution of the work, they shall be restored by the Contractor at his own cost and expense to a condition satisfactory to the COR.

REPLACEMENT OF DRAIN TILE AND STORM SEWER
All drain tile and storm sewers damaged, disturbed, or replaced as a result of the Contractor's operations shall be replaced with the same quality pipe or better, maintaining the same gradient as existing. The drain tile and/or storm sewer shall be connected to the curb underdrain, storm sewer system or outletted into the roadway ditch as applicable. Replaced drain tile/storm sewer shall be laid on compacted bedding equal in density to surrounding stratum. Replacement shall be done at time of the backfill operation.

ELEVATION DATUM
The elevations shown are based on the North American Vertical Datum of 1988. Said elevations originated from positional solutions derived independently from GPS observations of selected CORS base stations in the National Spatial Reference System and processed by the National Geodetic Survey's Online Positioning User Service Software and the GEOID09 model. Elevations from said traverse control points were then transferred by conventional leveling procedures to the permanent benchmarks listed hereon.

Contractor to confirm elevations and depths prior to ordering structures, performing open cut repairs, or any other work for which accuracy of depth and elevation is critical.

HORIZONTAL DATUM
The coordinates shown on this map are based on the Ohio State Plane Coordinate System, South Zone, NAD 83 (CORS96). Said coordinates originated from a field traverse which was tied (referenced) to said coordinate system by positional solutions derived by the National Geodetic Survey's Online Positioning Users Service software using GPS observations of selected CORS base stations in the National Spatial Reference System. The grid to ground scale factor (1.00008581590433) was applied at the location of point number 202

BENCH MARKS
The Contractor shall carefully preserve bench marks, property corners, reference points, and stakes. Any bench mark, property corner, or survey marker damaged or disturbed by the Contractor shall be reset by an Ohio Registered Surveyor at the Contractor's expense.

SIGNS, MAILBOX, FENCES, ETC.:
The Contractor shall be responsible for restoring all signs, mailboxes, fences, guardrail, shrubs, property, drainage structures, or other physical features disturbed or damaged during construction whether shown on the plans or not to their original location and condition and to the satisfaction of the COR.

MAINTAINING TRAFFIC
The Contractor shall provide all facilities and personnel required for maintaining local traffic and detouring through traffic during construction.

The Contractor shall be responsible for designing and maintaining safe and effective traffic control 24 hours a day for the duration of this project. All traffic control devices shall be furnished, erected, maintained, and removed by the contractor.

The Contractor shall devise a maintenance of traffic scheme which shall be presented to the COR for approval. The maintenance of traffic scheme shall present, in general, the method for conducting the required work in a safe and efficient manner.
The plans shall include the following components:
Plan view at an appropriate scale to show:

- Work area
- Begin/end of tapers, temporary markings, etc.
- Temporary pavement
- Locations of signs (existing overhead signs and all proposed, covered, or modified signs)
- Locations of typical sections
- References to applicable standard drawings
- Typical sections showing:
  - Lane widths, pavement markings, drums, PCB, etc.
  - Limiting stations
  - Work area and drop-offs
  - Sign details for proposed signs and overlays/modifications

The maintenance of traffic scheme shall be in conformance with the Ohio Manual of Uniform Traffic Control Devices, latest revision.

This submittal shall consist of three (3) copies of the plans for review and distribution. No work shall begin at the location until the maintenance of traffic plans have been approved by the COR.

EROSION & SEDIMENTATION CONTROL
The Contractor shall provide sediment control at all points where stormwater runoff leaves the project including waterways, overland sheet flow, and storm sewers. Erosion and sediment control shall be provided as per the requirements of the Dayton V.A., contract specifications, and the standards and Specifications of the "Rainwater and Land Development" manual of Ohio Department of Natural Resources (ODNR).

Erosion control measures are to be installed per NPDES permit regulations or as directed by the COR, and are to be maintained until such time that they are no longer required by the permit and the COR.

All land disturbing activities shall be subjected to inspection and site investigation by the COR. and/or the Ohio EPA. Failure to comply with these regulations is subject to legal enforcement action.

The Contractor is responsible to notify the COR 48 hours prior to commencement of initial site land disturbance on any site of one (1) or more acres. This includes site clearing, grubbing and any earth moving. Primary erosion and sediment control practices are mandated by regulations to be in place from the beginning of the construction activity.

All denuded areas shall have soil stabilization applied within seven (7) days of completion of grading operations if said areas are to remain undisturbed for more than forty-five (45) days.

It is the Contractor's responsibility to maintain the sediment and erosion control features used on this project. The site shall be inspected periodically and within 24 hours of significant rainfall event. Records of these inspections shall be kept and made available to jurisdictional agencies if requested. Any sediment or debris which has reduced the efficiency of a structure shall be removed immediately. Should a structure or feature become damaged, the Contractor shall repair or replace it at no additional cost to the Dayton V.A..

LATERAL LINER INSERTION PIT W/ RESTORATION INCLUDING 6" SANITARY SERVICE CLEANOUT, COMPLETE
Contractor is to excavate a lateral liner insertion pit prior to lining operations of Sanitary Services 6-in or less and, upon completion of lining, restore the excavated area per Detail "B" on Sheet GS2-01. The Contractor shall coordinate with the building manager & occupants prior to construction to develop an acceptable plan for maintaining sanitary service and/or temporary service outages during construction. The Contractor shall bypass the sewage around the section of sewer that is to be improved or coordinate with the COR on an acceptable time and duration for temporary sanitary service disruptions during nighttime hours specified above. Any service disruptions shall be performed between 5pm – 5am and shall last no longer than 3 hours. Contractor must obtain prior authorization from the COR for all temporary sanitary service disruptions. The Contractor shall restore pavement, yard, landscaped areas, fences, and any other structures or features to their preexisting conditions to the satisfaction of the COR. The dimensions of the liner pit provided in the plans is for layout and display purposes only. The means and methods of the Contractor will dictate actual sizes; therefore no additional payment will be made to the Contractor for excavation or restoration beyond the limits shown on the plans. Excess excavation shall be disposed of off-site. Any pavement disturbed shall be replaced according to the appropriate detail on Sheet GS2-01.

DESIGNER/ENGINEER DPD
CAD OPERATOR DCH
QAQC/CHECKER RMA

Revisions	Date
100% CD Submittal	01/29/2013

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Revised By:

Drawing Title: GENERAL NOTES
Project Title: SANITARY SEWER REHABILITATION
Date: 01/29/2013
Project No.: 552-13-309
Drawing No.: GS0-02
Approved: Project Manager: Chris Moorhead
Approved: Service Chief: Mark Permelia
Building Number: N/A
Checked: RMA
Drawn: DCH
Location: 4100 WEST THIRD STREET DAYTON, OH 45428

VAMC, DAYTON
VA Department of Veterans Affairs

MANHOLE REHABILITATION TABLE

Manhole Number	Northing	Easting	Existing Surface	Type of Manhole	Depth of Cementitious Rehab (Feet)	Replace Cover	Adjust to Grade	Pavement Replacement	Invert Elevation (Feet)	Top of Casting (Feet)
207	639390.04	1473032.51	Grass	Concrete	6.11	Yes			964.02	970.13
208	639533.69	1473039.53	Grass	Concrete	6.62	Yes			961.62	968.24
210	639814.37	1473157.88	Grass	Concrete	8.27	Yes			952.74	961.01
211	639251.81	1473015.77	Grass	Brick	8.66	Yes			964.88	973.54
212	639222.13	1472987.23	Concrete	Buried	6.5[A]	Yes	Yes		-	Buried
213	639073.41	1472975.19	Grass	Brick	8.82	Yes			966.54	975.36
214	639032.23	1473013.51	Grass	Brick	8.27	Yes			967.06	975.33
215	638705.76	1473190.28	Grass	Brick	9.51	Yes			966.63	976.14
250	639248.33	1472373.76	Grass	Buried	6.5[A]	Yes	Yes		-	Buried
405	640273.24	1473899.46	Grass	Concrete	6.14	Yes			933.13	939.27
406	640272.10	1473975.75	Asphalt	Concrete	5.40	Yes		✓	931.86	937.26
407	640436.67	1473966.41	Grass	Concrete	4.36	Yes			933.49	937.85
417	641073.08	1474496.45	Grass	Concrete	21.01	Yes			899.68	920.69
418	641148.31	1474676.12	Grass	Concrete	21.15	Yes			898.00	919.15
419	641170.43	1474878.11	Grass	Concrete	6.12	Yes			906.79	912.91
423	640262.87	1474242.47	Concrete	Concrete	5.41	Yes			926.11	931.52
424	640551.13	1474557.04	Concrete	Brick	6.04	Yes			916.11	922.16
425	640673.14	1474715.06	Grass	Buried	6.5[A]	Yes	Yes		-	Buried
431	640174.34	1474918.54	Grass	Brick	6.04	Yes			924.46	930.50
433	640173.17	1475028.58	Grass	Brick	5.33	Yes			922.46	927.80
452	640107.58	1475086.49	Grass	Concrete	8.70	Yes			917.75	926.45
456	640314.21	1474297.88	Grass	Brick	5.23	Yes			924.23	929.46
457	640783.00	1474890.89	Grass	Concrete	8.39	Yes			906.84	915.23
459	641177.96	1475012.72	Asphalt	Concrete	14.51	Yes		✓	896.17	910.68
461	641069.71	1474292.76	Asphalt	Concrete	13.02	Yes		✓	900.64	913.66
465	640264.09	1474223.66	Asphalt	Concrete	4.78	Yes		✓	926.61	931.39
479	640134.24	1473900.04	Grass	Buried	6.5[A]	Yes	Yes		-	Buried
506	638601.60	1473248.92	Grass	Concrete	7.14	Yes			967.31	974.45
507	638593.62	1473322.63	Concrete	Concrete	4.01	Yes			969.00	973.01
510	638834.62	1473278.77	Grass	Brick	8.75	Yes			965.01	973.76
511	638872.52	1473384.39	Grass	Brick	8.98	Yes			964.36	973.34
517	638947.04	1474042.77	Grass	Brick	4.19	Yes			959.60	963.79
518	638954.46	1473991.75	Asphalt	Concrete	11.49	Yes		✓	952.77	964.26
520	639075.70	1473987.96	Asphalt	Brick	7.16	Yes		✓	955.51	962.68
521	639066.90	1474048.54	Grass	Buried	5.90	Yes			956.03	961.93
524	639329.39	1473992.84	Grass	Concrete	10.89	Yes			949.27	960.16
525	639363.24	1474064.44	Grass	Brick	6.5[A]	Yes	Yes		-	958.54
526	639523.54	1474006.01	Grass	Concrete	10.92	Yes			948.14	959.06
535	639876.93	1474099.98	Grass	Concrete	4.13	Yes			939.25	943.38
536	639876.71	1474093.69	Grass	Concrete	8.50	Yes			934.92	943.42
544	639491.94	1475464.87	Grass	Concrete	6.5[A]	Yes	Yes		-	Buried
547	639072.05	1475027.95	Grass	Brick	6.67	Yes			910.41	917.08
548	639017.09	1474927.87	Grass	Concrete	6.13	Yes			917.15	923.28
556	638669.79	1474303.13	Grass	Brick	4.86	Yes			942.36	947.22
572	638586.71	1473429.19	Grass	Concrete	2.45	Yes			970.16	972.61
573	638595.36	1473292.69	Concrete	Brick	4.90	Yes			968.61	973.51
577	639421.39	1475383.15	Grass	Concrete	7.66	Yes			904.55	912.21
579	639781.28	1474092.31	Grass	Brick	5.36	Yes			942.96	948.32
580	640063.71	1474089.55	Grass	Concrete	8.33	Yes			929.85	938.18
581	639731.45	1474503.68	Grass	Brick	6.5[A]	Yes	Yes		-	Buried
582	639822.69	1474608.38	Grass	Concrete	5.60	Yes			943.54	949.14
583	639952.60	1474717.56	Grass	Brick	5.36	Yes			937.11	942.47
584	639103.64	1475093.03	Grass	Brick	4.28	Yes			906.18	910.46
587	639837.09	1474606.42	Asphalt	Buried	6.5[A]	Yes	Yes	✓	-	Buried
588	639359.00	1473029.00	Grass	Brick	6.5[A]	Yes	Yes		-	Buried
598	683447.00	1473851.22	Asphalt	Concrete	6.03	No			957.64	963.67
SUBTOTAL					416	55	9	7		

[A] These values are estimated for preliminary purposes only. Contractor is required to expose manhole, adjust to grade, and perform cementitious manhole rehabilitation. No additional payment will be made for variations in manhole depth from those presented in this table.

ESTIMATE OF QUANTITIES

Ref	Item No.	Description	Quantity	Units
1	614	Maintenance of Traffic	1	LS
2	015719	Sedimentation and Erosion Control	1	LS
3	024100	8-in Sanitary Pipe Removed and Disposed	40	LF
4	024100	10-in Sanitary Pipe Removed and Disposed	260	LF
5	024100	Remove and Dispose Structure	2	EA
6	212000	Permanent Gravel Driveway Pavement Replacement	40	SY
7	312000	Clearing and Grubbing	1	LS
8	320523	Sidewalk Replacement	25	SF
9	320523	Straight 18-in Curb	24	LF
10	321216	Permanent Roadway Pavement Replacment	30	SY
11	321216	Permanent Asphalt Driveway Pavement Replacement	40	SY
12	323153	Fence, Removed and Replaced, Decorative, w/ Conc Foundations	280	LF
13	329000	Topsoil, Furnished and Placed	40	CY
14	329000	Seeding and Mulching	480	SY
15	330130.16	Lateral Status Determination Report	1	LS
16	330130.51	Bypass Pumping	1	LS
17	330130.62	Cementitious Manhole Rehabilitation	416	VF
18	330130.72	8" Cured-In-Place Pipe, 6.0 mm Minimum Thickness	2,605	LF
19	330130.72	10" Cured-In-Place Pipe, 6.0 mm Minimum Thickness	96	LF
20	330130.72	12" Cured-In-Place Pipe, 7.5 mm Minimum Thickness	389	LF
21	330130.72	15" Cured-In-Place Pipe, 9.0 mm Minimum Thickness	382	LF
22	330130.72	15" Cured-In-Place Pipe, 12.0 mm Minimum Thickness	204	LF
23	330130.72	18" Cured-In-Place Pipe, 10.5 mm Minimum Thickness	1,108	LF
24	330130.72	18" Cured-In-Place Pipe, 12.0 mm Minimum Thickness	533	LF
25	330130.73	6" Cured-In-Place Pipe, 3.0 mm Minimum Thickness	899	LF
26	333000	Manhole, To Be Abandoned	4	EA
27	333000	Catch Basin, To Be Removed, Per Plan	1	EA
28	333000	Cut and Plug Sewers	3	EA
29	333000	8-in Sanitary Pipe, Granular Backfill	545	LF
30	333000	10-in Sanitary Pipe, Earth Backfill	260	LF
31	333000	Manhole, w/ Pipe Reconnect and Coupling	2	EA
32	333000	Manhole, Adjust to Grade	9	EA
33	333000	Manhole, ODOT Type 3, Eccentric Cone Top, Non-vented Lid	4	EA
34	333000	Manhole, Replace Cover w/ Surface Restoration	55	EA
35	333000	Sanitary Cleanout, w/ Access Pit	2	EA
36	333000	Catch Basin and Spring Drain, Per Plan	1	LS

The estimate above is provided for reference purposes only and is accurate to within 10%. It is the responsibility of the Contractor to verify all quantities and submit their bid price. No additional payment will be provided for constructed items that differ from this preliminary estimate.

PLAN LEGEND

Existing Conditions

- Underground Communications, Pedestal
- Underground Electric
- Underground Electric Manhole, Transformer, Pad Mtd High Volt Switch
- Fire Alarm
- Gas Line, Valve
- Underground Communication (Old Tele), Manhole
- Existing Sanitary Sewer, Manhole
- Tunnel
- Water Line, Valve
- Fire Hydrant & Valve
- Underground Lighting, Light Pole
- Fence
- (118) Building with I.D. Number
- Trees
- PT #14 Horizontal Control Point Location
- BM #15 Bench Mark (Vertical Control) Point Location (NAVD 1988)

New Work

- 000' ~ Ex 0" San / Line with 0.0mm CIPP — New Sanitary Sewer & Manhole Rehabilitation
- 000' ~ New 00" San — New Sanitary Sewer Replacement
- Existing Sanitary Sewer/Manhole – Previously Abandoned, or To Be Abandoned
- Permanent Roadway Replacement (Per Detail "C" Sheet GS2-01)
- Permanent Asphalt Driveway Replacement (Per Detail "D" Sheet GS2-01)
- Permanent Gravel Driveway Replacement (Per Detail "E" Sheet GS2-01)

Sediment & Erosion Control

- Sediment Fence (Per Detail "I" on GS2-01)
- Drop Inlet Protection – Filter Bag Type (Per Detail "F" Sheet GS2-01)
- Curb & Gutter Inlet Protection – Filter Bag & Dam Type (Per Detail "G" Sheet GS2-01)

Abbreviations

MH	Manhole
BM	Bench Mark
C	Communication
CB	Catch Basin
CI	Curb Inlet
COR	Contracting Officer's Representative
Ex	Existing
G	Gas
ODOT	Ohio Department of Transportation
OHE	Overhead Electric
OSHA	Occupational Safety and Health Administration
PT	Point
San	Sanitary
Strm	Storm
T	Telephone
UGL	Underground Lighting
W	Water

ATG	Adjust To Grade
CIPP	Cured-In-Place Pipe
DND	Do Not Disturb
PA	Previously Abandoned
TBA	To Be Abandoned
TBR	To Be Removed
TBRL	To Be Relocated
TBRH	To Be Rehabilitated

DESIGNER/ENGINEER DPD
CAD OPERATOR DCH
QAQC/CHECKER RMA

100% CD Submittal	01/29/2013
Revisions	Date

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STATE OF OHIO RYAN M. ANDREWS 70263 REGISTERED PROFESSIONAL ENGINEER
Professional Seal

Revised By: ---

Drawing Title: ESTIMATE OF QUANTITIES AND MANHOLE REHABILITATION TABLE
Project Title: SANITARY SEWER REHABILITATION
Date: 01/29/2013
Project No.: 552-13-309
Drawing No.: GS0-03
Approved: Project Manager: Chris Moorhead
Approved: Service Chief: Mark Permelia
Building Number: N/A
Checked: RMA
Drawn: DCH
Location: 4100 WEST THIRD STREET DAYTON, OH 45428

VAMC, DAYTON
Department of Veterans Affairs
VA

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1 Xref: 20120980-CS-TITL-N.dwg

SHEET NOTES

EXPOSE EXISTING UTILITIES
Where potential grade and alignment conflicts might occur with existing utilities, the Contractor shall expose utilities or structures sufficiently in advance of laying pipe for the design engineer to verify the vertical and horizontal effect on the new construction. Any discrepancy with the plans shall be coordinated with the Dayton V.A. to ensure that there are no construction or conflict issues associate with said discrepancy. The cost of this work shall be included in the unit price bid for the various improvement items if a specific item is not provided in the estimate of quantities.

CAUTION
O.S.H.A. Clearance requirements to be maintained during construction between equipment and overhead utility lines.

PLAN LEGEND
See "Plan Legend" on Sheet GS0-03 denoting symbols and linetypes for Existing Conditions, New Work, Sediment & Erosion Control, and Abbreviations.

PROJECT No. 6
Pennsylvania Ave. – Wisconsin Ave.
Area Improvement
SEE SHEET GS1-06

PROJECT No. 1
Gettysburg Ave.
Sewer Replacement
SEE SHEET GS1-02

(TBA)
From MH#425 to MH#458

PROJECT No. 8
Bldg. 220 – Bldg. 305
Area Improvement
SEE SHEET GS1-07

PROJECT No. 3
Bldg. 400 – Bldg. 115
Area Improvement
SEE SHEET GS1-04

PROJECT No. 9
Hospital Area
Improvement
SEE SHEET GS1-07

PROJECT No. 4
Ohio Ave. – New Jersey Ave. – Pennsylvania Ave.
Area Improvement
SEE SHEET GS1-05

(TBA)
From MH#535 to Bldg 116

PROJECT No. 2
Gettysburg Ave. – New York Ave. Improvement
SEE SHEET GS1-04

PROJECT No. 7
Bldg. 410 – Bldg. 412
Area Improvement
SEE SHEET GS1-06

PROJECT No. 5
Bldg. 320E – Bldg. 226
Area Improvement
SEE SHEET GS1-03

GRAPHIC SCALE
0 100 200 400
1 inch = 200 feet

DESIGNER/ENGINEER	DPD
CAD OPERATOR	DCH
QAQC/CHECKER	RMA

Revisions	Date
100% CD Submittal	01/29/2013

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DynamiQ Engineering Ltd.

STATE OF OHIO
RYAN M. ANDREWS
70263
REGISTERED PROFESSIONAL ENGINEER
Professional Seal

Revised By:

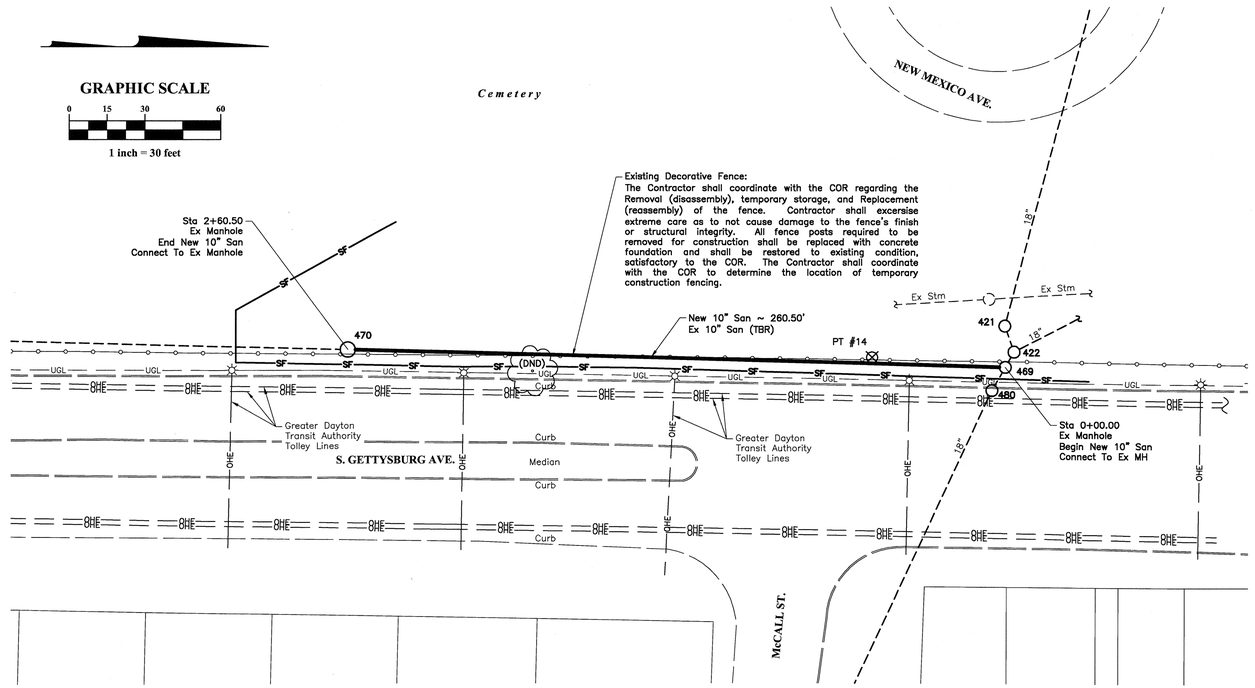
Drawing Title	PROJECT SUMMARY
Project Title	SANITARY SEWER REHABILITATION
Date	01/29/2013
Project No.	552-13-309
Drawing No.	GS1-01
Approved: Project Manager	Chris Moorhead
Approved: Service Chief	Mark Permelia
Building Number	N/A
Checked	RMA
Drawn	DCH
Location	4100 WEST THIRD STREET DAYTON, OH 45428

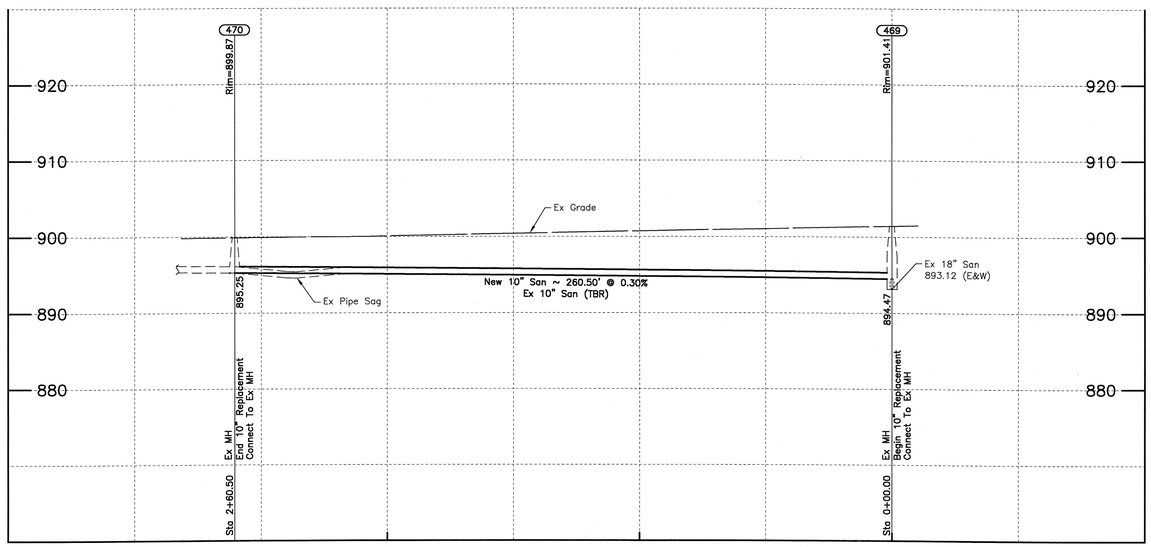
VAMC, DAYTON
Department of Veterans Affairs

GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet





SHEET NOTES

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CAUTION
O.S.H.A. Clearance requirements to be maintained during construction between equipment and overhead utility lines.

PLAN LEGEND
See "Plan Legend" on Sheet GS0-03 denoting symbols and linetypes for Existing Conditions, New Work, Sediment & Erosion Control, and Abbreviations.

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DESIGNER/ENGINEER DPD
CAD OPERATOR DCH
QAQC/CHECKER RMA

Revisions	Date
100% CD Submittal	01/29/2013

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STATE OF OHIO
RYAN M. ANDREWS
70263
REGISTERED
PROFESSIONAL ENGINEER
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Revised By:

Drawing Title
PROJECT No. 1:
GETTYSBURG AVE. SEWER REPLACEMENT

Project Title
SANITARY SEWER REHABILITATION

Approved: Project Manager
Chris Moorhead

Approved: Service Chief
Mark Permelia

Building Number
N/A

Checked
RMA

Drawn
DCH

Location 4100 WEST THIRD STREET
DAYTON, OH 45428

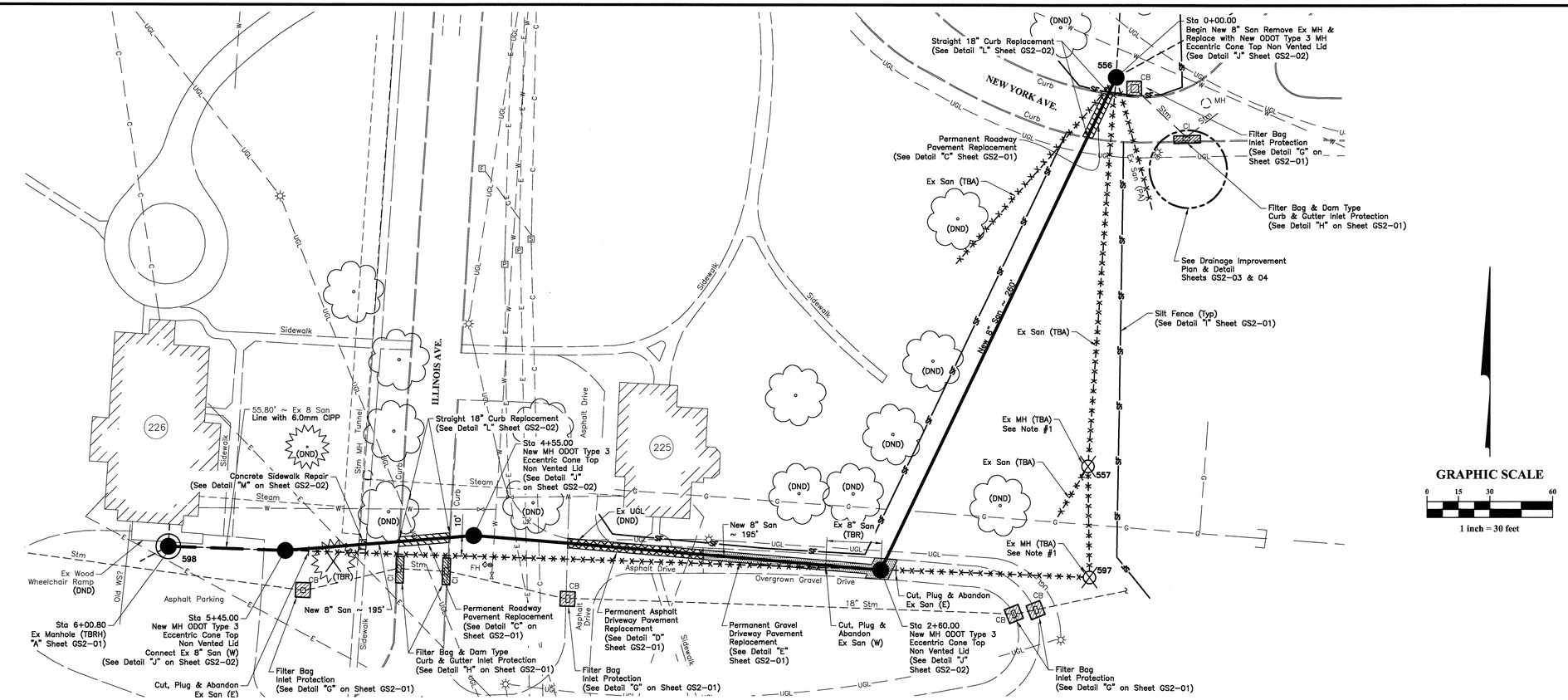
Date
01/29/2013

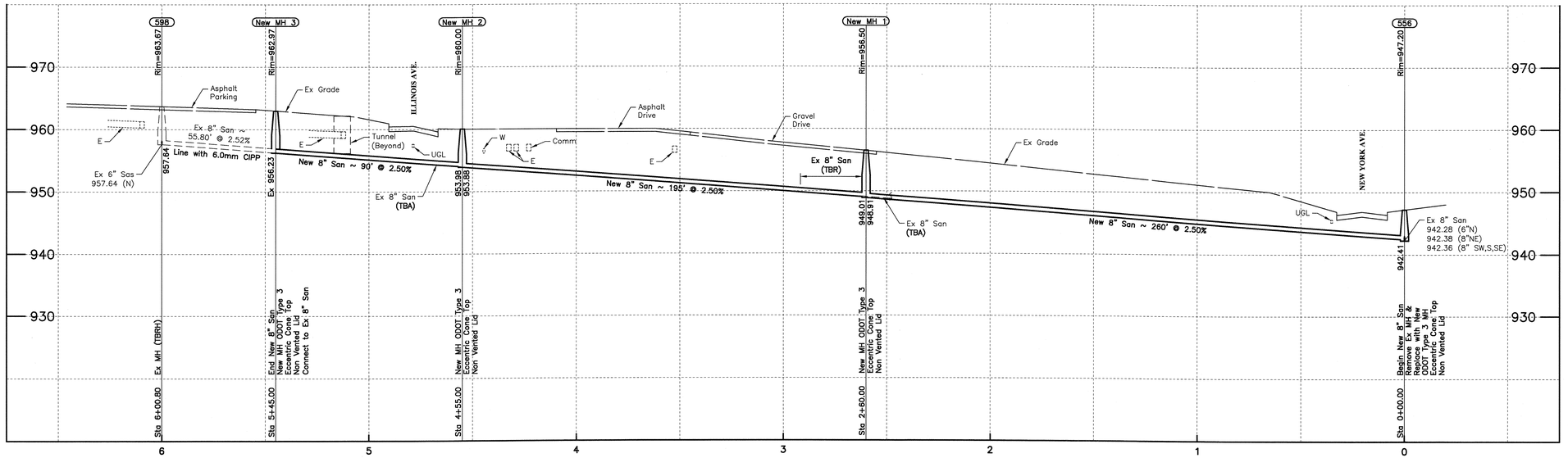
Project No.
552-13-309

Drawing No.
GS1-02

VAMC, DAYTON

Department of Veterans Affairs
VA





SHEET NOTES

1. EXISTING STRUCTURE TO BE ABANDONED (TBA)
Remove structure to a minimum of one foot below finished grade, seal existing pipes with concrete stoppers or masonry, backfill with topsoil, seed and mulch.

2. EXPOSE EXISTING UTILITIES
Where potential grade and alignment conflicts might occur with existing utilities, the Contractor shall expose utilities or structures sufficiently in advance of laying pipe for the design engineer to verify the vertical and horizontal effect on the new construction. Any discrepancy with the plans shall be coordinated with the Dayton V.A. to ensure that there are no construction or conflict issues associate with said discrepancy. The cost of this work shall be included in the unit price bid for the various improvement items if a specific item is not provided in the estimate of quantities.

3. CAUTION
O.S.H.A. Clearance requirements to be maintained during construction between equipment and overhead utility lines.

4. PRIOR TO ORDERING NewOSED STRUCTURES
The Contractor shall verify new structure top of casting elevation and the invert elevations of all connections with new and existing sewers. Any discrepancies between field conditions and design information presented on the plan should be brought to the attention of the Design Engineer.

5. PLAN LEGEND
See "Plan Legend" on Sheet GS0-03 denoting symbols and linetypes for Existing Conditions, New Work, Sediment & Erosion Control, and Abbreviations.

DESIGNER/ENGINEER DPD
CAD OPERATOR DCH
QAQC/CHECKER RMA

Revisions	Date
100% CD Submittal	01/29/2013

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Professional Seal

Revised By:

Drawing Title: PROJECT No. 5: BLDG. 320E – BLDG. 226 AREA IMPROVEMENT
Approved: Project Manager: Chris Moorhead
Approved: Service Chief: Mark Permelia

Project Title: SANITARY SEWER REHABILITATION
Building Number: N/A
Checked: RMA
Drawn: DCH
Location: 4100 WEST THIRD STREET DAYTON, OH 45428

Date: 01/29/2013
Project No.: 552-13-309
Drawing No.: GS1-03

VAMC, DAYTON
Department of Veterans Affairs
VA

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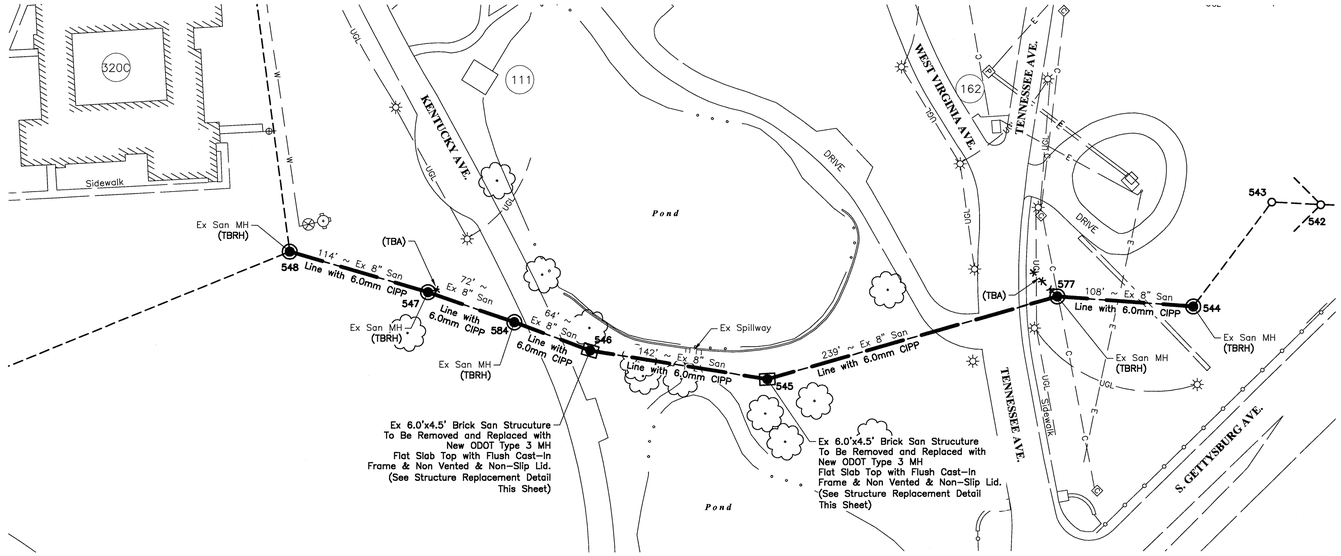


PROJECT No. 2
GETTYSBURG AVE. - NEW YORK AVE. IMPROVEMENT

GRAPHIC SCALE
0 30 60 120
1 inch = 60 feet

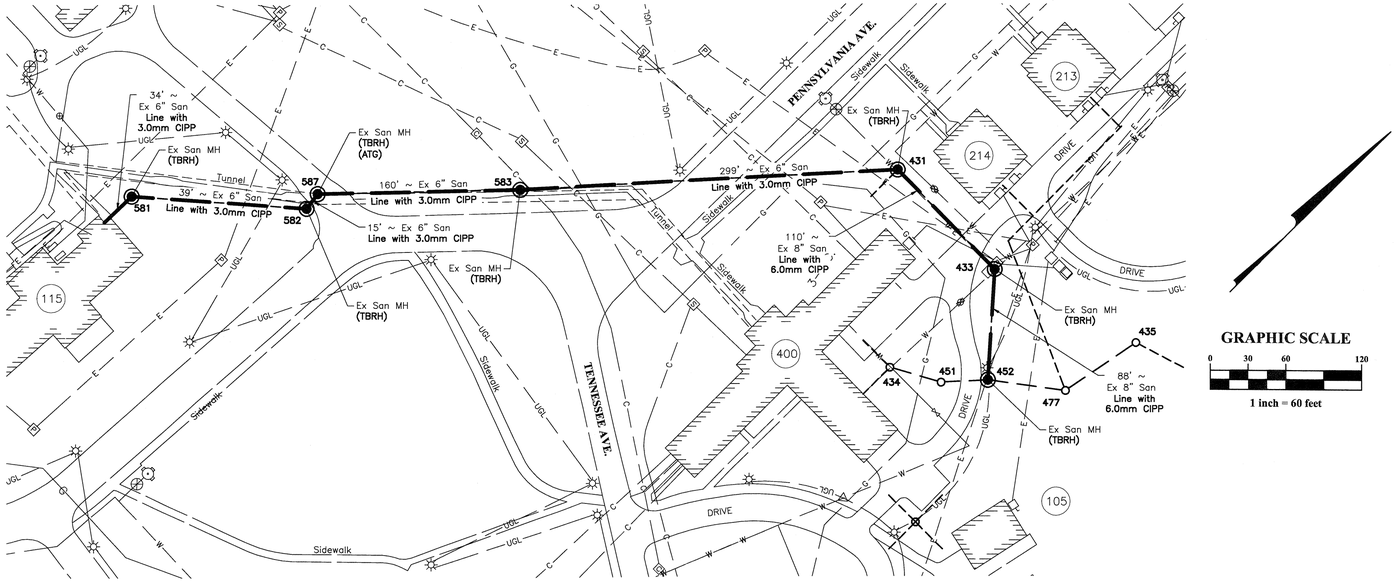
SHEET NOTES

EXPOSE EXISTING UTILITIES
Where potential grade and alignment conflicts might occur with existing utilities, the Contractor shall expose utilities or structures sufficiently in advance of laying pipe for the design engineer to verify the vertical and horizontal effect on the new construction. Any discrepancy with the plans shall be coordinated with the Dayton V.A. to ensure that there are no construction or conflict issues associate with said discrepancy. The cost of this work shall be included in the unit price bid for the various improvement items if a specific item is not provided in the estimate of quantities.

CAUTION
O.S.H.A. Clearance requirements to be maintained during construction between equipment and overhead utility lines.

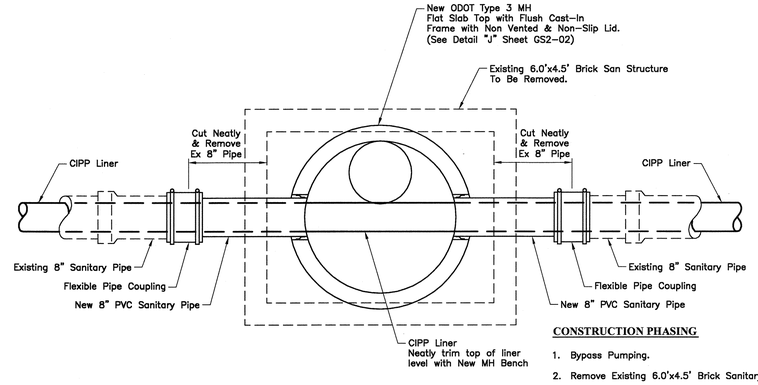
PRIOR TO ORDERING new STRUCTURES
The Contractor shall verify new structure top of casting elevation and the invert elevations of all connections with new and existing sewers. Any discrepancies between field conditions and design information presented on the plan should be brought to the attention of the Design Engineer.

PLAN LEGEND
See "Plan Legend" on Sheet GS0-03 denoting symbols and linetypes for Existing Conditions, New Work, Sediment & Erosion Control, and Abbreviations.



PROJECT No. 3
BLDG. 400 - BLDG. 115 AREA IMPROVEMENT

GRAPHIC SCALE
0 30 60 120
1 inch = 60 feet



STRUCTURE REPLACEMENT DETAIL
FOR MH 545 & MH 546
No Scale

CONSTRUCTION PHASING

1. Bypass Pumping.
2. Remove Existing 6.0'x4.5' Brick Sanitary Structure.
3. Installation of New ODOT Type 3 MH New 8" PVC Pipe & Couplings.
4. CIPP Lining.

DESIGNER/ENGINEER DPD
CAD OPERATOR DCH
QAQC/CHECKER RMA

Revisions	Date
100% CD Submittal	01/29/2013

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Professional Seal

Revised By:

Drawing Title
PROJECT No. 2:
GETTYSBURG AVE. – NEW YORK AVE. IMPROVEMENT
PROJECT No. 3:
BLDG. 400 – BLDG. 115 AREA IMPROVEMENT

Project Title
SANITARY SEWER REHABILITATION

Approved: Project Manager
Chris Moorhead

Approved: Service Chief
Mark Permelia

Building Number
N/A

Checked
RMA

Drawn
DCH

Location 4100 WEST THIRD STREET
DAYTON, OH 45428

Date
01/29/2013

Project No.
552-13-309

Drawing No.
GS1-04

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